

## U.S. EPA-NVFEL Small SI Engine Setup

1. The engine must have the following thermocouples installed:
  - Head temperature
  - Air inlet temperature
  - Oil sump temperature
  - Exhaust temperature

The thermocouples should be K type with mini connectors (See Fig. 1).

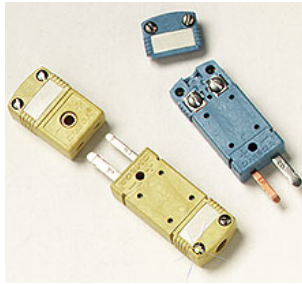


Fig. 1

2. The engine must be supplied with any necessary external cooling.
3. The engine must be supplied with all crankcase oil, coolant, and two-stroke oil required for test. The MSDS Sheets for these fluids must also be supplied.
4. The engine must be supplied with a manual adjustable throttle and governor control.
5. The engine must be supplied with the operator's manual
6. The engine must be supplied with external shut down and any controls needed for electric starters or other accessories. The wiring harness should be at least 8 feet long.
7. Dyno Hookup—Horizontal Engines  
The manufacturer is to supply the adapter needed for testing the engine. When the Engine arrives at NVFEL the adapter should be installed on the engine and ready for testing. EPA will use a Love-Joy LF16 coupler part number 38826. For horizontal engines please refer to Fig. 2 for adapter dimensions. The Manufacturer is responsible for selecting the appropriate material for the adapter. We recommend using 1040 cold rolled steel for adapters.

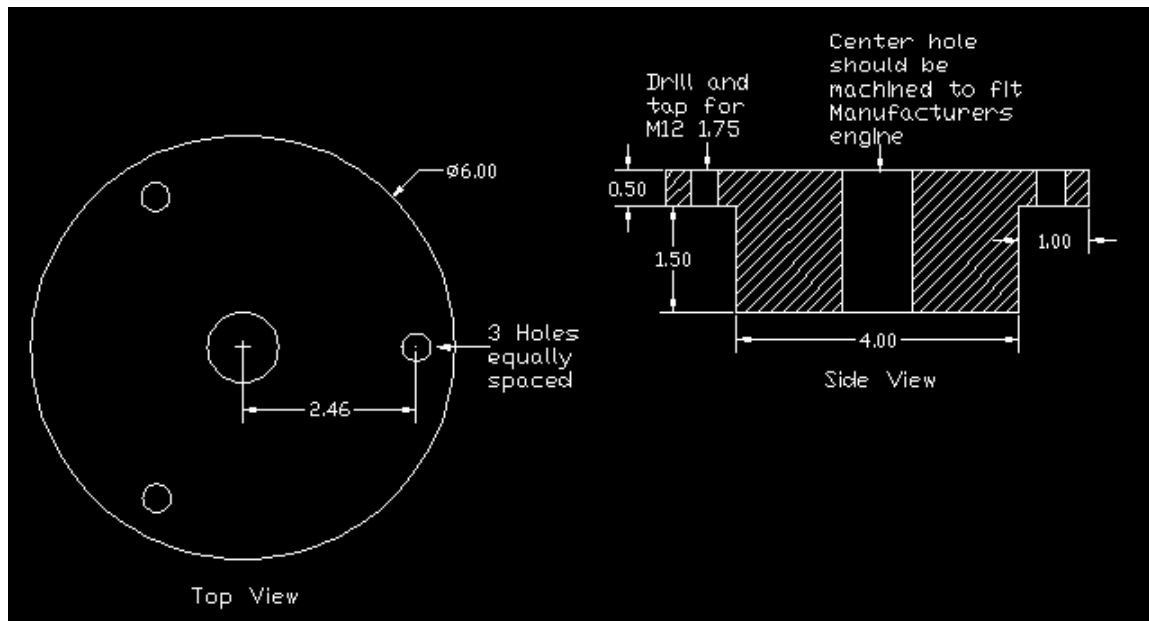


Fig. 2

8. The engine must be equipped with a muffler, air cleaner, and any other components needed to run the test.
9. The engine must be equipped with an hour meter and must read in 1/10 hour increments.